

Overview of Intelligence Tests

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Overview of Intelligence Tests

An **Intelligence Quotient** or **IQ** is a score derived from one of several different standardized tests attempting to measure intelligence.

True or False

Intelligence tests measure innate intelligence

(F) IQ's are based on children's interaction with the environment

IQ's are fixed and never change

(F) IQ's change as child develops

Intelligence tests provide perfectly reliable scores

(F) Test scores are estimates of a child's ability, usually reported as falling within a certain range (i.e., average, above average, etc).

True or False

- ❑ Intelligence tests measure all we need to know about a person's intelligence
(F) Any test only samples a person's skills. Some tests measure verbal and nonverbal skills but do not tap into a person's mechanical skills, creativity, and social intelligence.
- ❑ All intelligence tests measure the same thing
(F) Intelligence tests correlate with each other; however, they oftentimes measure different abilities. Therefore, scores on one type of intelligence test may differ from scores on a different intelligence test.

Popular IQ Tests

- ❑ Wechsler Scales (WISC-IV, WPPSI-III, WAIS-III, WNV)
 - ❑ Reynolds Intellectual Assessment Scale (RIAS)
 - ❑ Differential Ability Scale-Second Edition (DAS-II)
 - ❑ Kaufman Assessment Battery for Children, Second Edition (KABC-II)
 - ❑ Stanford-Binet Intelligence Test-Fifth Edition (SBV)
 - ❑ Universal Nonverbal Intelligence Test (UNIT)
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Selecting IQ test

- Child's age
 - Physical capabilities
 - Language proficiency
 - ESOL
 - Speech/language difficulties
 - Prior test results
 - Academic
 - Intelligence
 - Classroom tests
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Structure

- IQ tests come in many forms,
 - a single type of item or question
 - several different subtests
 - Yield both an overall score which measures general ability and individual subtest scores.
 - Most IQ's measure a child's crystallized and fluid ability.
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Crystallized Ability

- The ability to use skills, knowledge, and experience gained from exposure to the environment.
 - It is highly influenced by formal and informal education.
 - Tasks that measure crystallized intelligence include vocabulary, general information, and analogies.
 - It should not be equated with memory or knowledge, but it does rely on accessing information from long-term memory.
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Fluid Ability

- ❑ The ability to find meaning in confusion and solve new problems.
 - ❑ Fluid intelligence is basically nonverbal and culture-free.
 - ❑ It is the ability to draw inferences and understand the relationships of various concepts, independent of acquired knowledge.
 - ❑ Fluid intelligence generally correlates with measures of abstract reasoning, number and letter series, paired associates, and puzzle solving.
 - ❑ Fast processing speed and a large working memory is related to fluid intelligence.
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Memory

- Short-term memory- ability to remember information over a brief period of time (in the order of seconds). Estimates of short-term memory capacity vary – from about 3 or 4 elements (i.e., words, digits, or letters) to about 9 elements.
 - Long-term memory-ability to retrieve information stored as meaning, that can last as little as 30 seconds or as long as decades . Indefinitely stores an unlimited amount of information.
 - Working memory-structures and processes used for temporarily storing and manipulating information.
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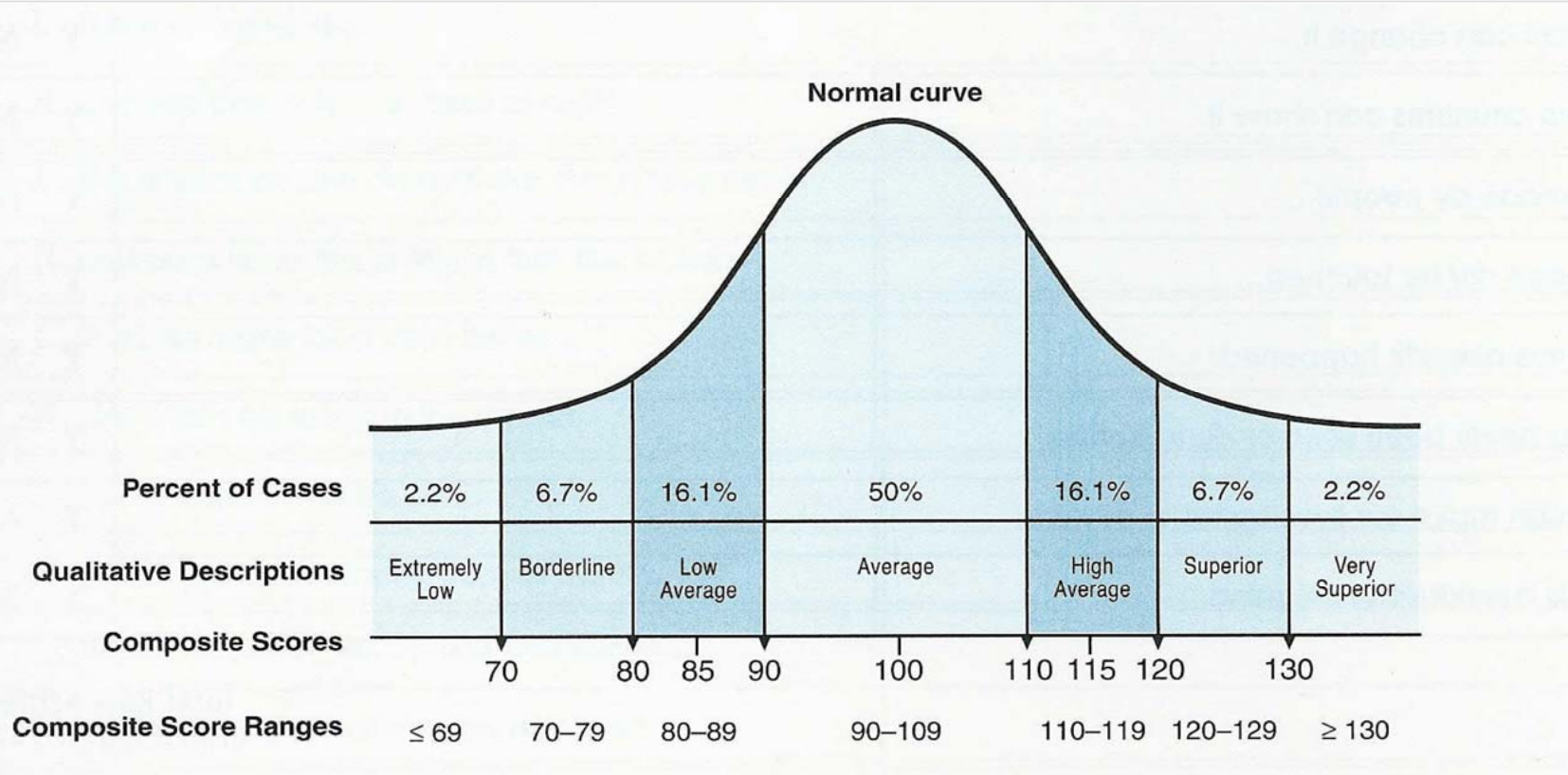
Processing Speed

Ability to perform tasks requiring sustained concentrated visual attention or working rapidly under timed conditions.

Scoring

- ❑ IQ tests are calibrated in such a way as to yield a normal distribution, or "bell curve".
 - ❑ Each IQ test, however, is designed and valid only for a certain IQ range. Because so few people score in the extreme ranges, IQ tests usually cannot accurately measure very low and very high IQs.
 - ❑ An individual's IQ score may or may not be stable over the course of the individual's lifetime.
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Normal Score Distribution Chart



Range of Scores

- **Range of Scores: (Standard Scores)**
 - 130+ = Very Superior
 - 120-129 = Superior
 - 110-119 = High Average
 - **90-109 = Average**
 - 80-89 = Low Average
 - 70-79 = Borderline
 - ≤ 69 = Extremely Low
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Intellectual Recommendations

ASSOCIATION OF ABSTRACT IDEAS/RELATIONSHIPS AND ABSTRACT THINKING

- ❑ Make sure child has a thorough understanding of the concepts of sameness and difference.
 - ❑ Match abstract concepts with pictures. (ex. Mother holding child - love. Clown - happy). Then have child do the same and tell why.
 - ❑ Present objects in which the commonalities are concrete and have child group them. Then, progress to grouping on abstract concepts.
 - ❑ Teach generalizations. (Ex. A hammer is a tool. What else is a tool?)
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GENERAL KNOWLEDGE AND INFORMATION

- ❑ Teach child basic history and science facts, what things are, their function, and other concrete types of information.
 - ❑ Work on direction exercises. Ask child in what direction in the community, state or world would he/she find something.
 - ❑ Encourage independent pleasure reading without requiring a formal book.
 - ❑ Encourage child to watch informational programs on the PBS, History, Discovery, Animal, and Learning channel.
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WORD KNOWLEDGE/ EXPRESSIVE VOCABULARY

- Have child learn new vocabulary using dictionary exercises.
 - Have child work simple crossword puzzles that use words of some educational content.
 - Encourage child to read materials for pleasure underlining and defining unknown words.
 - Teach child verbal logical reasoning skills by presenting different questions or situations that require verbal responses.
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PRACTICAL KNOWLEDGE AND SOCIAL JUDGMENT

- ❑ Have child read paragraphs in which some practical knowledge or social judgment is incorporated; have child give their interpretation, then discuss it.
 - ❑ Use sentence completion lessons, games, or sentences involving cause-effect relationships, effective planning and scheduling.
 - ❑ Present varied situations in paragraph form that require some practical knowledge such as “Why are there health inspectors?” or “Why do we pay taxes?”
 - ❑ Begin a story that would require some social judgment and let child complete it. Then review and discuss other ways it could be completed.
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PRACTICAL KNOWLEDGE AND SOCIAL JUDGMENT

- ❑ Encourage child to watch others around him/her or characters on TV and discuss the social interactions taking place.
 - ❑ Teach child to understand why type questions concerning everyday life matters. Ex: (Why do we have keys for things?)
 - ❑ Teach child to use practical judgment, by having them explain cause and effect relationships. (If I do this, _____ will occur. Try to include varied relationships of some social value.)
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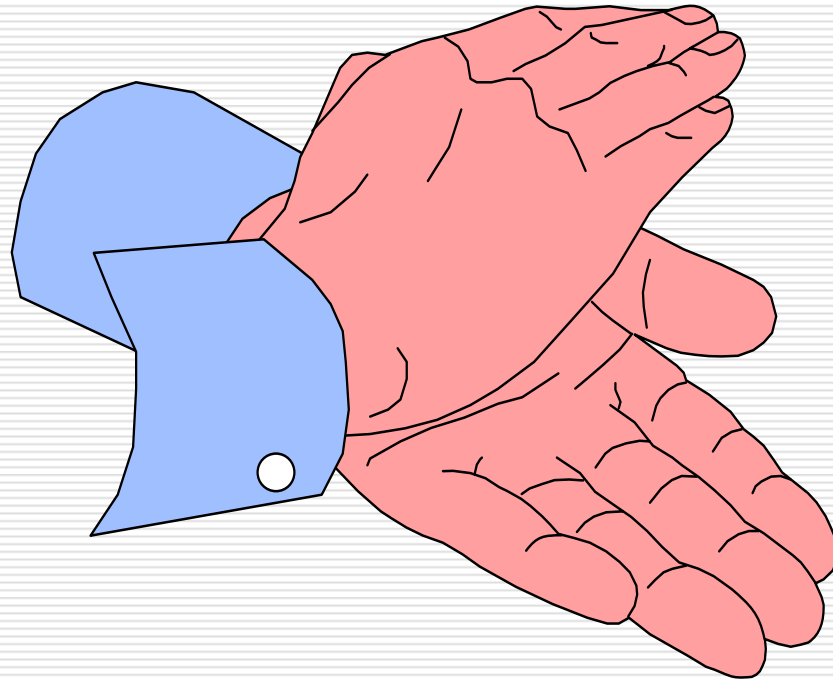
Information Processing

- ❑ Sort pictures into categories (animals, transportation, words, clothes, etc.)
 - ❑ Time child at simple copy work from the board and at rote arithmetic.
 - ❑ Quickly solve scrambled words or sentences.
 - ❑ Find all the mistakes in "What's wrong with this picture" pictures, as fast as you can.
 - ❑ Sort playing cards in different ways (color, suit, number). Time child.
 - ❑ Solve mazes. Time child.
 - ❑ Have child repeat a made-up series of numbers or letters, as fast as they can.
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Information Processing

- ❑ Have child repeat sentences word-for-word, as fast as they can. Try tongue twisters.
 - ❑ Solve puzzles of any kind (i.e., Sudoku).
 - ❑ Play games of strategy like chess, checkers, etc. Have a time limit for each move.
 - ❑ Play computer or video games.
 - ❑ Play a tape recorder at fast speed. Can child understand the words?
 - ❑ Time child doing any activity (making the bed, taking out the trash, etc.). Try to improve speed each time.
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Applause



Questions & Answers

References

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